IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: Capece, Christopher J.

Serial No.:   10/686,451

Filed: 10/15/2003

Group Art Unit: 2617

Examiner: Lam, Dung Le

For: NEURAL NETWORK-BASED EXTENSION OF
GLOBAL POSITION TIMING

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants respectfully request Pre-Appeal Brief Review of the final rejection in this case

because there is no *prima facie* case of obviousness.

The Examiner's proposed combination cannot be made because it changes the principle

of operation of the arrangement in the primary reference. MPEP 2143.10(VI) states that a

proposed modification or combination of the prior art does not establish a *prima facie* case of

obviousness when that proposed combination changes the principle of operation of a reference.

In this case, the Examiner proposes to combine the *Jin* reference (U.S. Pub. No. 2003/0012158)

with the *Martin* reference (US Pat. No. 7,299,214). The proposed combination cannot be made

and the rejection must be withdrawn.

The *Jin* reference discloses an arrangement in which one base station (BTS) includes a

global positioning system (GPS) device and the one BTS distributes the GPS timing information

1

over an Ethernet connection among several BTSs connected to the one that has the GPS device.

For example, paragraph 0008 on page 1 states:

> A telecommunication network is provided utilizing gigabit ethernet protocols and media. A global positioning system (GPS) and holdover stable oscillator (HSO) are installed aboard one of a plurality of base stations. The single CPS and HSO are used to synchronize all the base stations within the network by transmitting a clock signal via the gigabit ethernet media to each base station. The gigabit Ethernet signal is tapped by a clock recovery circuit, present in each base station, and the recovered signal serves as the master clock signal for the base station as well as a reference clock for the transmit and receive section.

Paragraph 0028 on page 3 teaches:

> For synchronization, a master clock or timing signal that is generated by a Global Positioning Receiver in one Base Station is conveyed to other base stations controlled by the same MSC. Currently, all base stations have a GPS and a holdover oscillator, all synched to the GPS time. The present invention eliminates the need for a GPS receiver and holdover stable oscillator in each Base Station by tapping the incoming gigabit ethernet signal and recovering an accurate synchronizing signal. A single GPS receiver and HSO is installed in one Base Station and utilized to synchronize other nearby Base Stations.

If there is no GPS signal available over the Ethernet connection, a clock recovery circuit at each connected BTS takes a data stream off the Ethernet connection and uses transitions of the data stream to "recover" the clock signal from the one BTS that includes the GPS device and a special oscillator to provide the clock signal. This is described, for example, in paragraphs 0037 and 0038 on page 4, which are quoted here.

> [0037] If it is determined that the GPS clock signal is not available, the process proceeds to step 606, which illustrates tapping the gigabit data stream being received into the base station and the signal being sent to a clock recovery circuit. The process continues to step 608, which depicts the clock recovery circuit processing the received signal. The process passes to step 610, which illustrates the recovered signal being sent to the transmit and receive local oscillators of the base station as a master clock signal. Additionally, the clock signal is sent to the base station transmitter section and locked reference clock for the receiver section. The process continues to step 600 to determine if a GPS clock signal is available.

> [0038] In the present invention, a base station, utilizing a gigabit ethernet, is

2

synchronized with mobile switching center clock by utilizing the incoming data stream from the network. The system clock is recovered from transitions of the data stream A follow up PLL circuit cleans up the phase noise caused by data rising or falling edge jitters. The cleaned up clock signal serves as the master clock for the base station as well as the reference clock for the transmitter section and locked reference clock for the receiver section The VCXO is utilized in the PLL circuit because of its low phase noise and excellent frequency stability.

If one were to make the substitution suggested by the Examiner (e.g., to substitute in *Martin's* predicted values of a "numeric data time flow"), in place of the clock signal recovery technique described in the *Jin* reference, that would completely change the principle of operation of the arrangement in the *Jin* reference. Such a modification cannot be made according to MPEP 2143.01(VI). Replacing the clock signal recovery technique of the *Jin* reference with *Martin's* predicted values of a "numeric data time flow" completely changes the principle of operation in the *Jin* reference and there is no *prima facie* case of obviousness because the Examiner's proposed combination cannot be made.

Another reason why the proposed combination cannot be made is that it would remove an intended feature from the *Jin* reference. As quoted above, an intended feature of the primary reference is to tap the gigabit data stream, provide that to the clock recovery circuit and use the local oscillators of the base station if the GPS clock signal is not available. That feature would be eliminated if the proposed modification to the *Jin* reference were made. Such a modification is not permissible when attempting to manufacture a *prima facie* case of obviousness.

The rejection of claims 1 and 14 must be withdrawn.

The rejection of these claims is based on the improper combination of *Jin* and *Martin*. Given that the combination cannot be made, there is no *prima facie* case of obviousness and the rejection must be withdrawn.

The rejection of claims 4-7,9, 11-13 and 17-20 must be withdrawn.

The rejection of these claims adds teachings from the *Telia* reference to the improper combination of *Jin* and *Martin*. The proposed addition of *Telia's* teachings does not remedy the defect in the proposed base combination and there is no *prima facie* case of obviousness. The rejection must be withdrawn.

The rejection of claims 2, 3, 10, 15 and 16 must be withdrawn.

The rejection of these claims is based on the proposed addition of the *Bullock* reference to the proposed combination of the *Jin* and *Martin* references. The *Bullock* reference does not remedy the defect in the proposed base combination of *Jin* and *Martin*. It is not possible to make the base combination and not possible to add the teachings of the *Bullock* reference, either. There is no *prima facie* case of obviousness and the rejection must be withdrawn.

Conclusion

The rejections that are the subject of this request for pre-appeal brief review are the same as those that were reviewed based on Applicant's request filed in October 2008. That review resulted in the rejections being withdrawn and prosecution being reopened. The rejections must once again be withdrawn. Rather than reopening prosecution, however, this case should be

4

allowed without further delay. The Office has repeatedly rejected the claims under 35 USC 103

but without ever establishing a legitimate *prima facie* case of obviousness. Applicant

respectfully requests withdrawal of the rejections and a notice of allowance.

Respectfully submitted,

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By: _____

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